INSTRUCTIONS

-J04023 REV. 2007-09-19

80-SPOKE FRONT WHEEL KIT

GENERAL

Kit Number

41203-05, 42958-07

Models

For model fitment information, please see the P&A Retail Catalog or the Parts and Accessories section of www.harley-davidson.com (English only).

NOTE

Accessory hub caps are not compatible with this wheel.

Additional Parts Required

This kit includes the custom wheel only.

Proper installation of this kit requires the separate purchase of the following parts which are available at a Harley-Davidson dealer:

- Wheel Bearing Remover and Installer (HD-44060)
- Wheel Installation Kit (See Service Parts Tables for part number)

The following Harley-Davidson Genuine Motor Accessories are recommended for proper maintenance and cleaning:

- Harley® Bright™ Chrome Cleaner (94683-99)
- Harley® Glaze™ Polish and Sealant (99701-84)
- Harley® Wheel and Spoke Brush (43078-99)
- Harley-Davidson® Wheel and Tire Cleaner (94658-98)

⚠WARNING

The rider's safety depends upon the correct installation of this kit. Use the appropriate service manual procedures. If the procedure is not within your capabilities or you do not have the correct tools, have a Harley-Davidson dealer perform the installation. Improper installation of this kit could result in death or serious injury. (00333a)

NOTE

This instruction sheet references Service Manual information. A Service Manual for your model motorcycle is required for this installation and is available from a Harley-Davidson Dealer.

Kit Contents

See the Service Parts section for kit contents.

INSTALLATION

1. Remove existing front wheel assembly. Save axle, axle nut, brake disc and wheel spacers for kit installation. Refer to FRONT WHEEL in Service Manual.

   For FLSTC and FLSTN Models: Discard moon-style hub cap.

   For FXSTD Models: Discard tapered spacer.

2. Install valve stem assembly on wheel. Refer to TIRES in Service Manual.

CAUTION

Do not re-use brake disc screws. Re-using disc screws can result in torque loss and damage to rotor and/or brake assembly. (00319b)

NOTES

Install the primary bearing first using appropriate Service Manual and WHEEL BEARING REMOVER/INSTALLER.

- ***Kits 41203-05:*** *Should be installed so that the machined groove and cast-in markings on the hub are on the right side of the motorcycle.*
- ***Kit 42958-07:*** *Should be installed so that the machined groove, valve stem and cast-in markings on the hub are on the left side of the motorcycle.*
- ***Kits 41203-05:***

  For 2007 FXST, FXSTB, FXSTC Models: The primary bearing side is the left side.

  For 2006 and earlier FXST, FXSTS, FXSTB, FXSTC, FXSTD and 2007 and earlier FXDWG Models: The primary bearing side is the right side.

  For FXSTS Models: Install the brake disc on the right side.

  For all other models: Install the brake disc on the left side.

- ***Kit 42958-07:*** *The primary bearing side is the left side.*

3. Assemble wheel installation kit components and brake disc(s) to wheel, using the appropriate service parts table. Refer to FRONT WHEEL in Service Manual.
4. **For FLSTC and FLSTN Models:** Install wheel kit and right side wheel spacer provided in installation kit. Refer to FRONT WHEEL in Service Manual.

   For FXSTD Models: Install the right side axle spacer provided in the installation kit in place of the stock tapered axle spacer.

   For FXSTS Models: Install the left side axle spacer provided in the installation kit between the stock axle spacer and fork.

   For all other models: Install previously removed wheel spacers. Refer to FRONT WHEEL in Service Manual.

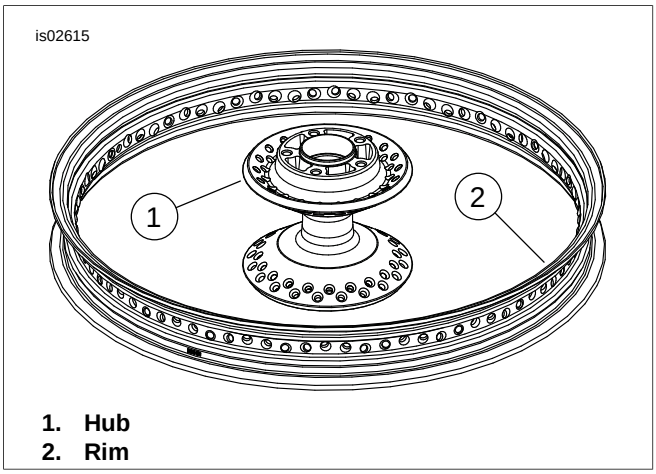
5. Install front wheel (1), stock axle and stock axle nut. Refer to FRONT WHEEL in Service Manual.

WHEEL LACING PROCEDURE

NOTE

If only the rim is to be replaced, tape the spokes together to hold the position on hub and remove spokes from rim. Install taped hub/spoke assembly to the new rim and tighten spokes. Then remove the tape and true wheels.

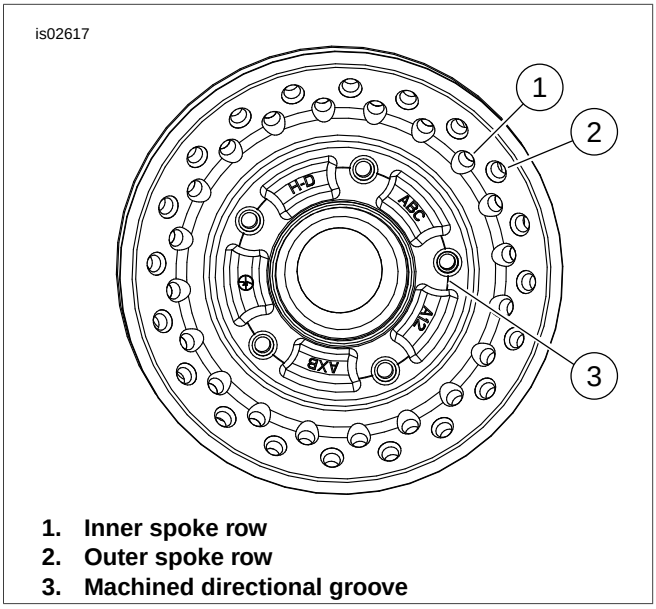
The nipple fitting of the spoke uses a standard T-30 TORX® bit for removal and installation.



1. **Hub**
2. **Rim**

Figure 1. Spoke Wheel Components (21-inch wheel shown)

The 80-spoke wheel uses two lengths of spokes, installed in the inner and outer rows on the hub. See Figure 2.



1. **Inner spoke row**
2. **Outer spoke row**
3. **Machined directional groove**

Figure 2. Spoke and Directional Groove Location on Hub

See Figure 3 and Table 1. Measure distance "A" (outer) to determine outer and inner spoke lengths. Separate outer and inner spokes in preparation for installation to hub and rim.

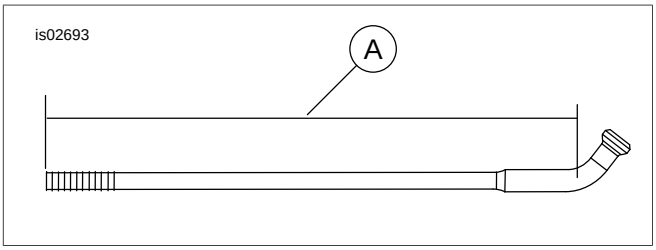


Figure 3. Spoke length

Table 1. Spoke Lengths

Spoke	Length (A)
Outer spoke (21-inch wheel)	7.83 inch (199 mm)
Inner spoke (21-inch wheel)	8.35 inch (212 mm)
Outer spoke (16-inch wheel)	5.19 inch (132 mm)
Inner spoke (16-inch wheel)	5.59 (142 mm)

1. See Figure 4. Place the hub on table with machined groove side up. Insert a spoke in each hole of the **outer** row as shown. Angle the spokes clockwise.
2. **For Kits 42958-07:** Center the rim over the hub assembly with the valve stem hole facing up. See Figure 5.

   For Kit 41203-05: The rim size should face up.
3. See Figure 4. Using any **outer** row spoke, insert the first spoke into the rim hole to the left of the valve stem hole on the upper half of the rim centerline. Loosely assemble the spoke nipple.

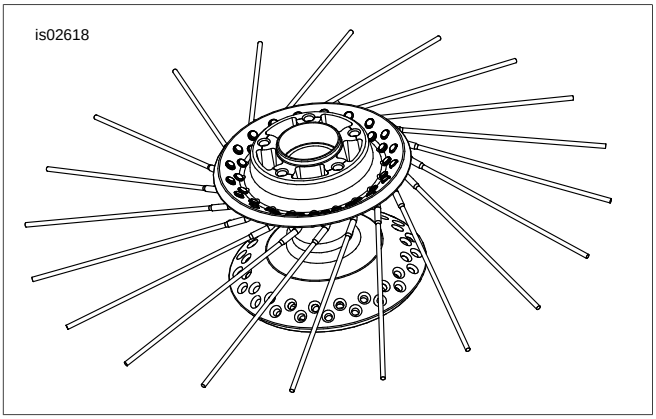
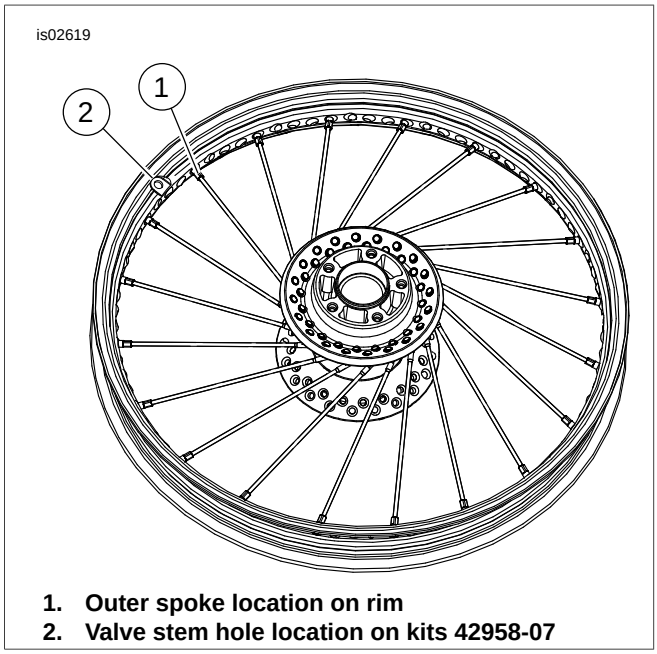


Figure 4. Install Outer Spokes on Hub



1. Outer spoke location on rim
2. Valve stem hole location on kits 42958-07

Figure 5. Install Outer Spokes (21-inch wheel shown)

4. Install the rest of **outer** row spokes in every fourth hole. Loosely assemble the spoke nipples.
5. See Figure 6. Insert the first **inner** row spoke into the hub. Angle the spoke counterclockwise crossing **four** outer row spokes. Loosely assemble the spoke nipples.

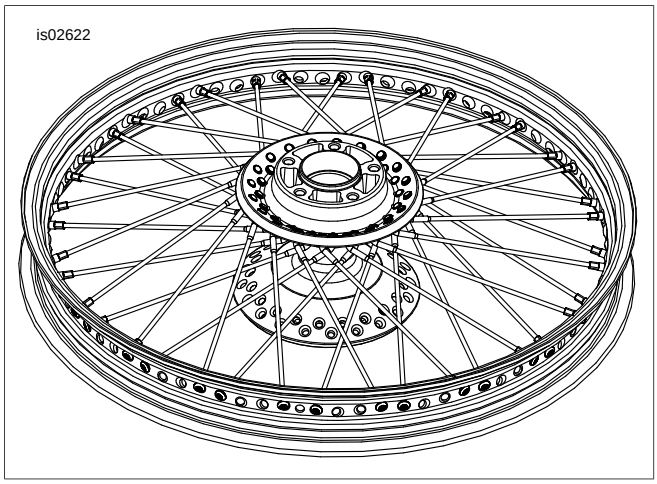


Figure 6. Install Inner Spokes (21-inch wheel shown)

6. Install the inner row spokes into every **fourth** remaining hole above the rim centerline. Loosely assemble the spoke nipples.
7. See Figure 7. Turn rim over so brake disc side faces **down**. Place any **outer** row spoke into hub. Angle spoke counterclockwise and insert into rim hole angled to accept it. Loosely assemble the spoke nipple.

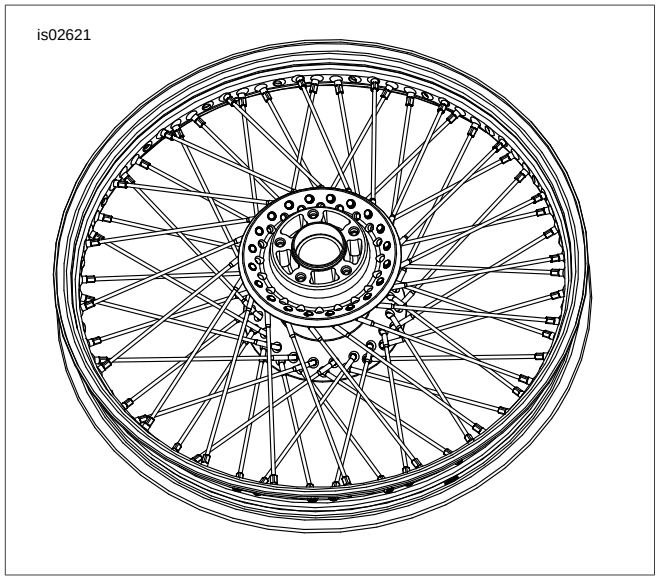


Figure 7. Install Outer Spokes (21-inch wheel shown)

8. Insert the remaining **outer** row spokes, angled counterclockwise, into hub and rim. Loosely assemble the spoke nipples.
9. Insert **inner** row spoke into hub and angle spoke clockwise, crossing over 4 outer row spokes. Place spoke into appropriate rim hole. Loosely assemble the spoke nipples.
10. See Figure 8. Install remaining **inner** row spokes. Loosely assemble the spoke nipples.
11. Tighten spoke nipples to 19-35 **in-lbs** (2.2-4 Nm).

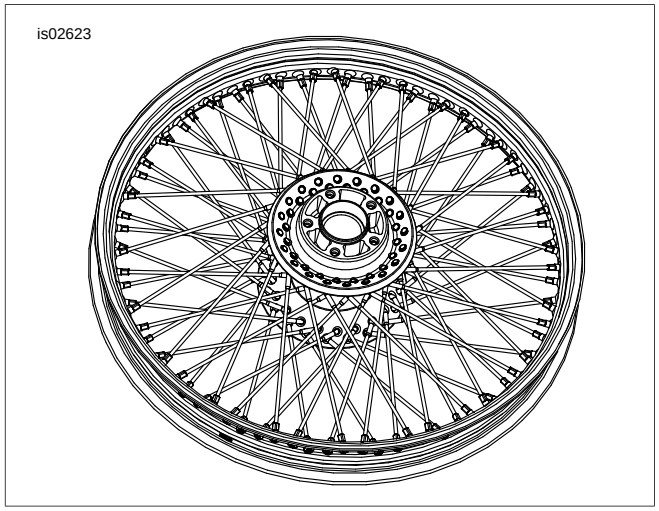
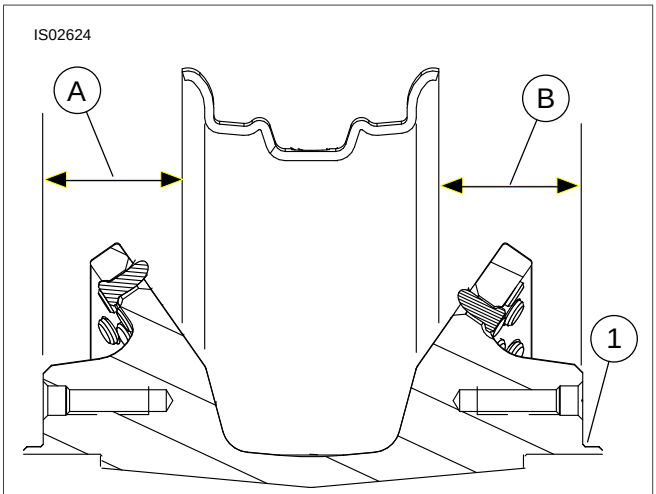


Figure 8. Remaining Inner Spoke Installation (21-inch wheel shown)

TRUING LACED WHEELS

The rim must be trued both laterally and radially. If new bearings were installed, wheels may be trued with only the bearings and center spacer installed. See Figure 9 and Table 2 for the proper offset dimensions for your wheel.



1. Cast-in marking or groove side of hub.

Figure 9. Offset Dimension

Table 2. Wheel Offset Dimensions

Kit Number	"A"	"B"
41203-05	1.69 inch (42.8 mm)	1.48 inch (37.7 mm)
42958-07	1.17 inch (29.6 mm)	0.93 inch (23.6 mm)

See TRUING LACED WHEELS the Service Manual for your model motorcycle.

MAINTENANCE AND CLEANING

Chrome parts must be maintained regularly to ensure that they keep their original shine and luster.

1. Clean heavily-soiled wheel surfaces using Harley-Davidson Wheel and Tire Cleaner applied with the Harley Wheel and Spoke Brush.
2. Thoroughly clean chrome with a good quality chrome cleaner, such as Harley Bright Chrome Cleaner.
3. After cleaning and polishing, seal the finish with a good quality sealer, such as Harley Glaze Polish and Sealant.

SERVICE PARTS

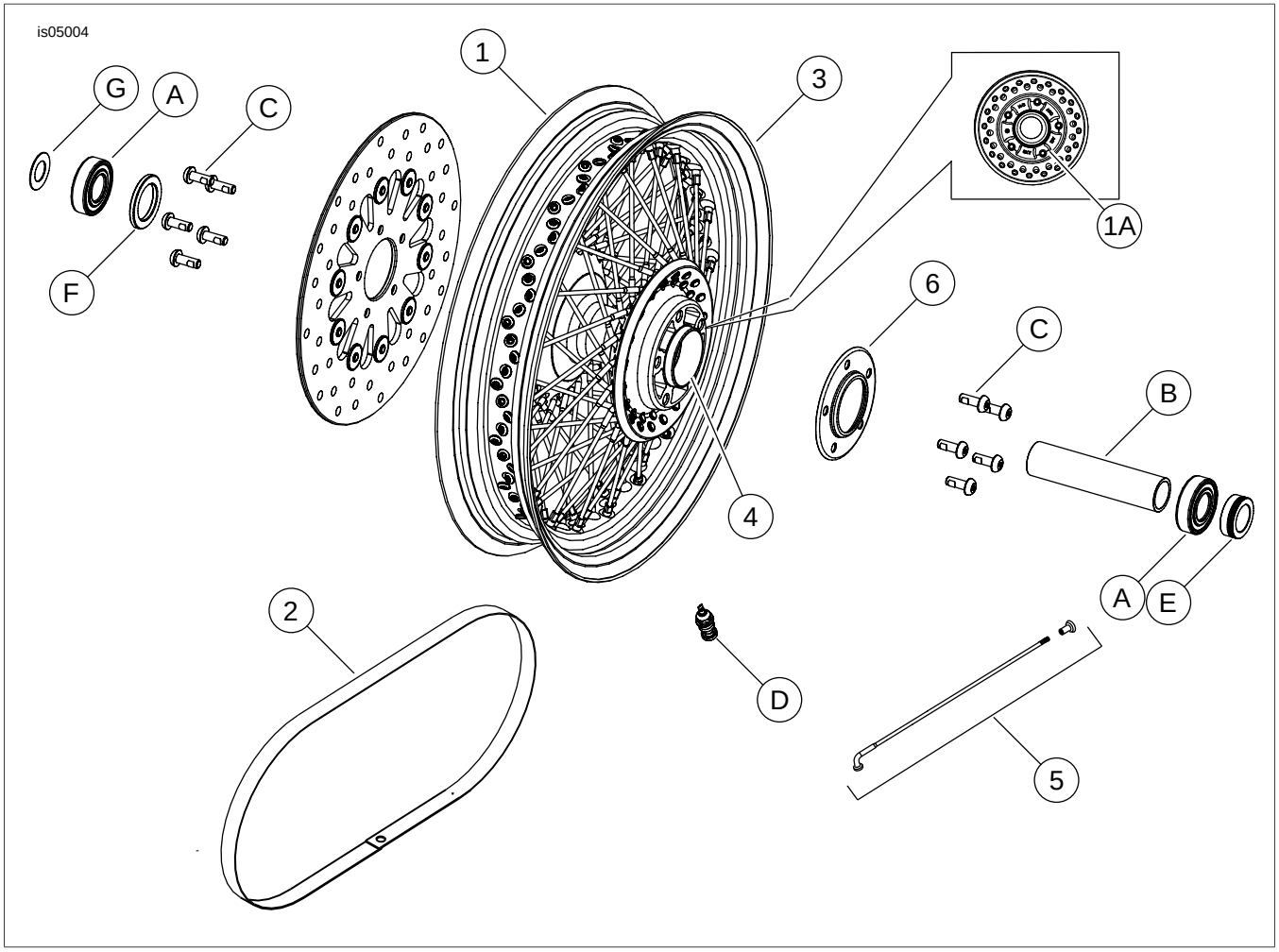


Figure 10. Service Parts: 80-Spoke Front Wheel (21-inch wheel shown)

Table 3. Service Parts Table

Item	Description (Quantity)	Kit Number 41203-05	Kit Number 42958-07
1	Wheel assembly (consists of items 2, 3, 4, 5)	Not Sold Separately	Not Sold Separately
2	• Rim strip	43939-89	43147-40
3	• Rim	41253-05	43087-04
4	• Hub	41255-05	41133-04
5	• Spoke and nipple kit (contains 20 inner spokes, 20 outer spokes and 40 nipples)	41337-05	41899-05
6	Hub plate (1)	44614-03	44614-03

Table 4. Service Parts Table for Wheel Kit 42958-07

Kit	Installation Kit	Item	Description (Quantity)	Part Number
42958-07		1	Wheel	Not Sold Separately
		1A	Machined groove	Not Sold Separately
		6	Hub plate	44614-03
		Items requiring separate purchase:		

Table 4. Service Parts Table for Wheel Kit 42958-07

Kit	Installation Kit	Item	Description (Quantity)	Part Number
2000-2006 FLST, FLSTC, FLSTF and FLSTN (Not 2006 FLSTFSE2) • For FLSTC and FLSTN Models: Wheel spacer (43617-00A) is included to replace the moon-style hub cap.	43833-07 Front 16x3 Fitment	A	Bearing (2)	9267
		B	Sleeve, bearing spacer	43608-00
		C	Screws (10)	3655A
		E	Spacer, axle (FLSTC and FLSTN only)	43617-00A
		Discard the following components which are provided with this installation kit but are not required for this fitment.		
		Sleeve, bearing spacer		43536-00
		Sleeve, bearing spacer		43613-00
		Valve stem		43157-83A
		Valve stem		43206-01
		Spacer, axle		43313-98
		Spacer, axle		40910-00A
2007 and later FLSTC and FLSTN • For FLSTC and FLSTN Models: Wheel spacer (41695-07) is included to replace the moon-style hub cap.	43851-08 Front 16x3 Fitment	A	Bearing (2)	9276
		B	Sleeve, bearing spacer	41349-07
		C	Screws (10)	3655A
		E	Spacer, axle (FLSTN and FLSTC only)	41695-07
		F	Shim, bearing (install under primary (left side) bearing)	43315-07
		Discard the following components which are provided with this installation kit, but are not required for this fitment.		
		Shim, bearing		43903-08
		Sleeve, bearing spacer		41900-08
		Spacer, axle		41504-07
		Valve stem		43157-83A
		Valve stem		43206-01

Table 5. Service Parts Table for Wheel Kit 41203-05

Kit	Installation Kit	Item	Description (Quantity)	Part Number
41203-05		1	Wheel	Not Sold Separately
		1A	Machined groove	Not Sold Separately
		6	Hub plate	44614-03
		Items requiring separate purchase:		
2000-2006 FX Softail (except FXSTDSE) and 2000-2005 FXDWG • For FXSTS Models: Install spacer (43313-98) on the left side of the vehicle between the stock wheel spacer and fork. • Wheel spacer (40910-00A) is included to replace the tapered spacer on FXSTD models.	43833-07 Front 21Wx2.15 inch Fitment	A	Bearing (2)	9267
		B	Sleeve, bearing spacer	43536-00
		C	Screws (10)	3655A
		E	Spacer, axle (FXSTD only)	40910-00A
		G	Spacer, axle (FXSTS only)	43313-98
		Discard the following components which are provided with this installation kit but are not required for this fitment.		
		Sleeve, bearing spacer		43608-00
		Sleeve, bearing spacer		43613-00
		Valve stem		43157-83A
		Valve stem		43206-01
		Spacer, axle		43617-00A

Table 5. Service Parts Table for Wheel Kit 41203-05

Kit	Installation Kit	Item	Description (Quantity)	Part Number
2006-2007 FXDWG	43848-08 Front 21x2.15 inch Fitment	A	Bearing (2)	9247
		B	Sleeve, bearing spacer	43633-06
		C	Screws (10)	3655A
		Discard the following components which are provided with this installation kit, but are not required for this fitment.		
		Spacer, axle		43517-00
		Sleeve, bearing spacer		43755-04
		Sleeve, bearing spacer		43641-01
		Screws, TORX® (10)		3762M
		Washers (10)		6966M
		Valve stem		43157-83A
		Valve stem		43206-01
2007 FX Softail • Wheel spacer (41504-07) is included to replace the tapered spacer for 2007 and later FXSTD. • The left side of the wheel is the primary bearing side for this fitment.	43851-08 Front 21x2.15 inch Fitment	A	Bearing (2)	9276
		B	Sleeve, bearing spacer	41349-07
		C	Screws (10)	3655A
		E	Spacer, axle (FXSTD only)	41504-07
		F	Shim, bearing (install under primary [left side] bearing)	43315-07
		Discard the following components which are provided with this installation kit, but are not required for this fitment.		
		Shim, bearing		43903-08
		Sleeve, bearing spacer		41900-08
		Spacer, axle		41695-07
		Valve stem		43157-83A
		Valve stem		43206-01